

1127  
#2

OIPE

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/988,117

DATE: 11/28/2001

TIME: 11:06:05

Input Set : A:\00742.066002.SEQLIST.TXT

Output Set: N:\CRF3\11212001\I988117.raw

ENTERED

4 <110> APPLICANT: Benjamin, Thomas L.  
5 Li, Dawei  
6 Mok, Samuel C.  
7 Cramer, Daniel W.  
8 Ma, Yupo  
10 <120> TITLE OF INVENTION: Diagnosing and Treating Cancer Cells  
11 Using Sal2  
13 <130> FILE REFERENCE: 00742/066002  
C--> 15 <140> CURRENT APPLICATION NUMBER: US/09/988,117  
C--> 15 <141> CURRENT FILING DATE: 2001-11-16  
15 <150> PRIOR APPLICATION NUMBER: US 09/812,633  
16 <151> PRIOR FILING DATE: 2001-03-19  
18 <150> PRIOR APPLICATION NUMBER: US 60/216,723  
19 <151> PRIOR FILING DATE: 2000-07-07  
21 <160> NUMBER OF SEQ ID NOS: 21  
23 <170> SOFTWARE: FastSEQ for Windows Version 4.0  
25 <210> SEQ ID NO: 1  
26 <211> LENGTH: 1005  
27 <212> TYPE: PRT  
28 <213> ORGANISM: Homo Sapiens  
30 <400> SEQUENCE: 1  
31 Met Ala His Glu Ser Glu Arg Ser Ser Arg Leu Gly Val Pro Ala Gly  
32 1 5 10 15  
33 Glu Pro Ala Glu Leu Gly Gly Asp Ala Ser Glu Glu Asp His Pro Gln  
34 20 25 30  
35 Val Cys Ala Lys Cys Cys Ala Gln Phe Thr Asp Pro Thr Glu Phe Leu  
36 35 40 45  
37 Ala His Gln Asn Ala Cys Ser Thr Asp Pro Pro Val Met Val Ile Ile  
38 50 55 60  
39 Gly Gly Gln Glu Asn Pro Asn Asn Ser Ser Ala Ser Ser Glu Pro Arg  
40 65 70 75 80  
41 Pro Glu Gly His Asn Asn Pro Gln Val Met Asp Thr Glu His Ser Asn  
42 85 90 95  
43 Pro Pro Asp Ser Gly Ser Ser Val Pro Thr Asp Pro Thr Trp Gly Pro  
44 100 105 110  
45 Glu Arg Arg Gly Glu Glu Ser Ser Gly His Phe Leu Val Ala Ala Thr  
46 115 120 125  
47 Gly Thr Ala Ala Gly Gly Gly Gly Leu Ile Leu Ala Ser Pro Lys  
48 130 135 140  
49 Leu Gly Ala Thr Pro Leu Pro Pro Glu Ser Thr Pro Ala Pro Pro Pro  
50 145 150 155 160  
51 Pro Pro Pro Pro Pro Pro Pro Pro Gly Val Gly Ser Gly His Leu Asn  
52 165 170 175  
53 Ile Pro Leu Ile Leu Glu Glu Leu Arg Val Leu Gln Gln Arg Gln Ile  
54 180 185 190  
55 His Gln Met Gln Met Thr Glu Gln Ile Cys Arg Gln Val Leu Leu Leu  
56 195 200 205

## RAW SEQUENCE LISTING

DATE: 11/28/2001

PATENT APPLICATION: US/09/988,117

TIME: 11:06:05

Input Set : A:\00742.066002.SEQLIST.TXT

Output Set: N:\CRF3\11212001\I988117.raw

```
57 Gly Ser Leu Gly Gln Thr Val Gly Ala Pro Ala Ser Pro Ser Glu Leu
58      210                      215                      220
59 Pro Gly Thr Gly Thr Ala Ser Ser Thr Lys Pro Leu Leu Pro Leu Phe
60 225                      230                      235                      240
61 Ser Pro Ile Lys Pro Val Gln Thr Ser Lys Thr Leu Ala Ser Ser Ser
62                      245                      250                      255
63 Ser Ser Ser Ser Ser Ser Ser Gly Ala Glu Thr Pro Lys Gln Ala Phe
64                      260                      265                      270
65 Phe His Leu Tyr His Pro Leu Gly Ser Gln His Pro Phe Ser Ala Gly
66                      275                      280                      285
67 Gly Val Gly Arg Ser His Lys Pro Thr Pro Ala Pro Ser Pro Ala Leu
68      290                      295                      300
69 Pro Gly Ser Thr Asp Gln Leu Ile Ala Ser Pro His Leu Ala Phe Pro
70 305                      310                      315                      320
71 Ser Thr Thr Gly Leu Leu Ala Ala Gln Cys Leu Gly Ala Ala Arg Gly
72                      325                      330                      335
73 Leu Glu Ala Thr Ala Ser Pro Gly Leu Leu Lys Pro Lys Asn Gly Ser
74                      340                      345                      350
75 Gly Glu Leu Ser Tyr Gly Glu Val Met Gly Pro Leu Glu Lys Pro Gly
76                      355                      360                      365
77 Gly Arg His Lys Cys Arg Phe Cys Ala Lys Val Phe Gly Ser Asp Ser
78      370                      375                      380
79 Ala Leu Gln Ile His Leu Arg Ser His Thr Gly Glu Arg Pro Tyr Lys
80 385                      390                      395                      400
81 Cys Asn Val Cys Gly Asn Arg Phe Thr Thr Arg Gly Asn Leu Lys Val
82                      405                      410                      415
83 His Phe His Arg His Arg Glu Lys Tyr Pro His Val Gln Met Asn Pro
84                      420                      425                      430
85 His Pro Val Pro Glu His Leu Asp Tyr Val Ile Thr Ser Ser Gly Leu
86                      435                      440                      445
87 Pro Tyr Gly Met Ser Val Pro Pro Glu Lys Ala Glu Glu Glu Ala Ala
88      450                      455                      460
89 Thr Pro Gly Gly Gly Val Glu Arg Lys Pro Leu Val Ala Ser Thr Thr
90 465                      470                      475                      480
91 Ala Leu Ser Ala Thr Glu Ser Leu Thr Leu Leu Ser Thr Ser Ala Gly
92                      485                      490                      495
93 Thr Ala Thr Ala Pro Gly Leu Pro Ala Phe Asn Lys Phe Val Leu Met
94                      500                      505                      510
95 Lys Ala Val Glu Pro Lys Asn Lys Ala Asp Glu Asn Thr Pro Pro Gly
96                      515                      520                      525
97 Ser Glu Gly Ser Ala Ile Ser Gly Val Ala Glu Ser Ser Thr Ala Thr
98      530                      535                      540
99 Leu Met Gln Leu Ser Lys Leu Met Thr Ser Leu Pro Ser Trp Ala Leu
100 545                      550                      555                      560
101 Leu Thr Asn His Phe Lys Ser Thr Gly Ser Phe Pro Leu Pro Leu Cys
102                      565                      570                      575
103 Ala Arg Ala Leu Gly Ala Ser Pro Ser Glu Thr Ser Lys Leu Gln Gln
104                      580                      585                      590
105 Leu Val Glu Lys Ile Asp Arg Gln Gly Ala Val Ala Val Thr Ser Ala
```

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/988,117

DATE: 11/28/2001

TIME: 11:06:05

Input Set : A:\00742.066002.SEQLIST.TXT

Output Set: N:\CRF3\11212001\I988117.raw

106		595				600				605						
107	Ala	Ser	Gly	Ala	Pro	Thr	Thr	Ser	Ala	Pro	Ala	Pro	Ser	Ser	Ser	Ala
108		610					615					620				
109	Ser	Ser	Gly	Pro	Asn	Gln	Cys	Val	Ile	Cys	Leu	Arg	Val	Leu	Ser	Cys
110	625					630					635					640
111	Pro	Arg	Ala	Leu	Arg	Leu	His	Tyr	Gly	Gln	His	Gly	Gly	Glu	Arg	Pro
112					645					650					655	
113	Phe	Lys	Cys	Lys	Val	Cys	Gly	Arg	Ala	Phe	Ser	Thr	Arg	Gly	Asn	Leu
114				660					665					670		
115	Arg	Ala	His	Phe	Val	Gly	His	Lys	Ala	Ser	Pro	Ala	Ala	Arg	Ala	Gln
116			675					680					685			
117	Asn	Ser	Cys	Pro	Ile	Cys	Gln	Lys	Lys	Phe	Thr	Asn	Ala	Val	Thr	Leu
118		690					695					700				
119	Gln	Gln	His	Val	Arg	Met	His	Leu	Gly	Gly	Gln	Ile	Pro	Asn	Gly	Gly
120	705					710					715					720
121	Thr	Ala	Leu	Pro	Glu	Gly	Gly	Gly	Ala	Ala	Gln	Glu	Asn	Gly	Ser	Glu
122					725						730				735	
123	Gln	Ser	Thr	Val	Ser	Gly	Ala	Gly	Ser	Phe	Pro	Gln	Gln	Gln	Ser	Gln
124				740					745					750		
125	Gln	Pro	Ser	Pro	Glu	Glu	Glu	Leu	Ser	Glu	Glu	Glu	Glu	Glu	Glu	Asp
126			755					760					765			
127	Glu	Glu	Glu	Glu	Glu	Asp	Val	Thr	Asp	Glu	Asp	Ser	Leu	Ala	Gly	Arg
128		770					775					780				
129	Gly	Ser	Glu	Ser	Gly	Gly	Glu	Lys	Ala	Ile	Ser	Val	Arg	Gly	Asp	Ser
130	785					790					795					800
131	Glu	Glu	Ala	Ser	Gly	Ala	Glu	Glu	Glu	Val	Gly	Thr	Val	Ala	Ala	Ala
132					805						810				815	
133	Ala	Thr	Ala	Gly	Lys	Glu	Met	Asp	Ser	Asn	Glu	Lys	Thr	Thr	Gln	Gln
134				820					825					830		
135	Ser	Ser	Leu	Pro	Pro	Pro	Pro	Pro	Pro	Asp	Ser	Leu	Asp	Gln	Pro	Gln
136			835					840					845			
137	Pro	Met	Glu	Gln	Gly	Ser	Ser	Gly	Val	Leu	Gly	Gly	Lys	Glu	Glu	Gly
138		850					855					860				
139	Gly	Lys	Pro	Glu	Arg	Ser	Ser	Ser	Pro	Ala	Ser	Ala	Leu	Thr	Pro	Glu
140	865					870					875					880
141	Gly	Glu	Ala	Thr	Ser	Val	Thr	Leu	Val	Glu	Glu	Leu	Ser	Leu	Gln	Glu
142					885					890					895	
143	Ala	Met	Arg	Lys	Glu	Pro	Gly	Glu	Ser	Ser	Ser	Arg	Lys	Ala	Cys	Glu
144				900					905					910		
145	Val	Cys	Gly	Gln	Ala	Phe	Pro	Ser	Gln	Ala	Ala	Leu	Glu	Glu	His	Gln
146			915					920					925			
147	Lys	Thr	His	Pro	Lys	Glu	Gly	Pro	Leu	Phe	Thr	Cys	Val	Phe	Cys	Arg
148		930					935					940				
149	Gln	Gly	Phe	Leu	Glu	Arg	Ala	Thr	Leu	Lys	Lys	His	Met	Leu	Leu	Ala
150	945					950					955					960
151	His	His	Gln	Val	Gln	Pro	Phe	Ala	Pro	His	Gly	Pro	Gln	Asn	Ile	Ala
152					965					970					975	
153	Ala	Leu	Ser	Leu	Val	Pro	Gly	Cys	Ser	Pro	Ser	Ile	Thr	Ser	Thr	Gly
154				980					985					990		

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/988,117

DATE: 11/28/2001

TIME: 11:06:05

Input Set : A:\00742.066002.SEQLIST.TXT

Output Set: N:\CRF3\11212001\I988117.raw

155 Leu Ser Pro Phe Pro Arg Lys Asp Asp Pro Thr Ile Pro  
156 995 1000 1005  
159 <210> SEQ ID NO: 2  
160 <211> LENGTH: 16080  
161 <212> TYPE: DNA  
162 <213> ORGANISM: Homo sapiens  
164 <400> SEQUENCE: 2

165 atatacacc ccagctggct atgtaatcat gaaataagga gaaacacata aatattttggt 60  
166 taaaacacct ttaatgatag agggaaagac actaatatct cccgtctggt cttgacattt 120  
167 tactaggtta ggaagctctg gagcctacag cttgaggaga agccatcgtt caagtcagtc 180  
168 aatagcaaaa cctcactctt ctctcctca gaactcctgt tccaaatgat cctatgttaa 240  
169 gagtaaatac tacaactcat tacaagacgg agaggcagg aggacgccac ctggagctgg 300  
170 gactcttaag aaccagacaa tgacaaagac acaagcccca gcctacggat aggcaaaatg 360  
171 ggtaggggtc ttgaaagagg aagataagga aaatacaagg ggccagggaa taaaggaggg 420  
172 agttatctaa aactagaagc atactagtgc taggaaatcc cccatgatcc ctggtacacc 480  
173 tctgcacact atgtcactat tagcccaaaa gaatattaac gagaatgtcc acattcaca 540  
174 gaatttgagg ctttttcctt tacatcatgt ccttttctta gtcacatagg taccagcaag 600  
175 ccctatgttc tagcaacatt ccttaactct ctcatcatta gttcatcaac catgctgacc 660  
176 aaaaatgtct cttaaagata cgaacttcac atttcccaaa tatctcctgg gagacctctt 720  
177 ggcaagaaat cagcttgttt cccaactttg agaggtcac atgaatgaga agctggagag 780  
178 gtcttggcac actgaccagc caaaaccttt acctaatgt gaccatcagg ggatttactg 840  
179 ggaaaatttt cctatgccct tcttctattt ctccctactt cctaggggtg ggtcaccaat 900  
180 tactggagca tcttcagtac cggcaccttc tggagcagg ggaggaagaa ggaatgtaca 960  
181 gtttgcactt tctgtctat gatgggcttc tcaggcactg ccttgggtgc aggaggctga 1020  
182 aataggaggg gggctgtctt ctcttggct tccctggatc ccattgttg aggaccttc 1080  
183 ccagccacag ttctaggcc aaacagcact ggtggggcca ggcttggagt ggtagtggag 1140  
184 gtggagctgg aattccaggg cttcatgggc aggccatttg acaggaatgc cacatactgg 1200  
185 ttctagaaag ataggggacc catacccacc agctgagcag aaaggtcacc ccagaggagt 1260  
186 ggcactgggc cctccagaga cagctgccag cccttttttg ctaggctgca atgccaaatg 1320  
187 taggtgtcga ggtgcacct ccaaaggga agggagagga gagaggagg ggaagaagg 1380  
188 tcacaccagg gaagctggag agggttcccc ttgagaaagc tgacagaaat ctatgttctt 1440  
189 caggtacaaa gaatgaggag ggaagaaaaa ttcttaggg ggccatcccc ttgtaagcac 1500  
190 agtaatttcc aagctcaggg actacagaaa agccactagg gacataacat gttaagaact 1560  
191 tagagaaaaa gacaaaatca gggctcataa ctctgggagg tctttttgtg aagctgtttc 1620  
192 tgctctgttg gacaaagagc agcaggtaca gaaaaacagg ctcatgggat cgtggggtca 1680  
193 tcttttcggg gaaaggggga gagccctgtg gaggtgatgg aaggcgaaca gccagggact 1740  
194 agagaaagag cagcaatatt ctgagggcca tggggggcaa agggctgtac ctggtggtgt 1800  
195 gccaggagca tatgcttctt gagggtagcc cgctcaagaa agccctgcct gcagaaaaca 1860  
196 caagtgaaga gcggcccttc cttgggggtg gtcttctgat gctcctccag agctgcctgg 1920  
197 gagggaaagg cctggccaca cacttcgcag gcctttctgc tgctgtcttc tctggctcc 1980  
198 tttctcattg cctcctgcag gctcagctcc tctaccaagg tcacgtggt ggcttcccct 2040  
199 tctgggggtg gtgctgatgc cggacttgag cttctctccg gtttgccccc ctcttcctt 2100  
200 cctcctaaaa caccactgct tccctgctcc attggctgag gctgatccag gctgtcagg 2160  
201 ggtggtggtg gtggcaagaa agactgttga gtagttttct cattaactgt catctccttc 2220  
202 ccagctgttg ctgctgccgc cactgtcccc acctcctct ctgccccaga tgcccttct 2280  
203 gaatcacctc tactgatata tgcttctca cctccactct ctgagcctct cctgccagg 2340  
204 gaatcttcat cagtacatc ttctcttct tctcctcct cctcttctc ctctcagac 2400  
205 aactcctctt ccggtgatgg ctgctgggac tgctgtggg ggaactccc tgccccggag 2460  
206 actgtagatt gctcggagcc attctcctga gcagctctc caccttcagg gagtgcagta 2520

## RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/988,117

DATE: 11/28/2001

TIME: 11:06:05

Input Set : A:\00742.066002.SEQLIST.TXT

Output Set: N:\CRF3\11212001\I988117.raw

```
207 ccaccgttgg ggatctggcc cccaggtgc atccggacat gctgctgcag agtgacagca 2580
208 ttggtgaact tcttctggca gatggggcag gaattctgtg cccgggcagc tggactggcc 2640
209 ttgtggccca cgaaatgtgc acgcagatta cccctggtgg agaaggctct gccacacact 2700
210 ttgcatttga agggcctctc acctccatgt tggccataat gaaggcgtag ggcccagagga 2760
211 cagctaagca ctcgagagaca gatgacacac tggttaggtc cagaagaggc tgaggatgaa 2820
212 ggtgcagggg cagaggtggt gggggctcct gaggcagctg aggtcaccgc cacagctcct 2880
213 tgccggtcaa tctttctac cagttgctgc agctttgatg tctcagaggg tgaggccccc 2940
214 aagggtctta gcacataggg gaagggaag ctgccagtgg acttgaagtg gttggttaagc 3000
215 agtgcaccagc ttggtagtga agtcaccaac ttacttagtt gcatgagagt tgccgtgcta 3060
216 ctttctgccca ctccactgat ggctgagccc tcactccctg ggggggtggt ttcacagct 3120
217 ttattcttgg gtccactgc tttcatgagc acaaacttat tgaaagcagg gagtccctgga 3180
218 gccgtggctg tgctgcact ggtggagagc agagtcaggc tctctgtggc actgagtgtc 3240
219 gttgtggagg ccaccagagg cttgcgtcca accctccac ctggagtggc tgccctctcc 3300
220 tcggccttct ctggtggcac ggacatacca taaggcaagc cactgctggt aatgacatag 3360
221 tctaggtgct ctggtactgg gtgtgggttc atctgcacat gtgggtactt ctcacgatgc 3420
222 cgggtgaaat gcactttgag gttgccacgg gtggtaaaac ggtttccaca gacattgcac 3480
223 ttatagggcc tctcaccctg gtgggaacga aggtggatct gcagggcact gtcactgcca 3540
224 aatacttttg cacagaagcg gcatttgtgc cttccaccag gcttctccaa gggaccatc 3600
225 acttctccgt agctcagctc accacttcca ttctttggct tcaggagccc tggggaggca 3660
226 gtggcctcaa ggctcgggc tgcccacaaga cactgtgctg ccagtagtcc cgtggtgctt 3720
227 gggaatgccca gatgaggcga ggcaatcagc tgatctgtgc tgcttgcaa ggctggggaa 3780
228 ggggcagggg tgggtttgtg gcttcgccc accctccag cagagaaagg atgctgtgac 3840
229 cccagtgggt ggtaaagggt gaagaaggcc tgcttgggcg tttctgccc tgaagaggaa 3900
230 gaggaggagg aggaggaaga tgccagtgtc ttgctggttt ggacaggctt gatggggctg 3960
231 aagaggggta gtaggggctt ggtggaagag gcagtcctg tcccaggtag ctctgaggga 4020
232 ctggcagggg caccaccctg ctggcctaag gagccaagca acagcacctg cctgcagatt 4080
233 tgctcagtca tctgcactg atggatctgc cgtgctgca gcaccctag ctcttccaag 4140
234 atcaggggga tattcaagtg gccactgect accctgggg gcggaggggg tgggtggagga 4200
235 ggagggggtg caggggtcga ttctggaggt aatgggggtt ctcccagctt gggactggcc 4260
236 aagatcaggc cccgcctcc cccagccgt gtacctgtg cagcgaccag gaaatgccct 4320
237 ggagactcct ctctctcct ctctgggcc caggtgggat ccgtgggcac ggaggacca 4380
238 gaatctgggg ggtgtctatg ctctgtgtcc atgacctgag gattattgtg accctcaggc 4440
239 cggggttcag aggagccga agagtgttg gggttctcct ggcccccaat tatcaccatt 4500
240 acaggagggt cagtagaaca tgcttcttg tgggcgagga attcagttgg gtcagtgaat 4560
241 tgtgcgcagc acttggcaca gacttggggg tgatcctcct cgttagcatc acctggggag 4620
242 aagacaagga gagagagcgt ggggtggcgca gttgggttg gtataccgag gctctaatta 4680
243 acaaggaggc cagtaaccgc tagttggggg tggggagatg agctcaccat cagggccatg 4740
244 cagaagtcta gagctcaggc ctgatccgtg tggacaggag acaaccggc atggggcagg 4800
245 ggggtgggga gggaggagg gaggggggca agagcatgct actccctcc tcagccacce 4860
246 tcccttcccc aggccacaag cgagttcacg gaataggtgt ggggacaggg gcctacgcag 4920
247 agaatcatgc attttctccc accaccgaa agtcttcgcc gccctgcgc atccccctcc 4980
248 gccccacccc ctgcccagcc cgaccgaccc taccgcacct ccgagctctg ccggtctccc 5040
249 gcagggcacc ccgagacgag agctcctctc ggattcgtgc gccatggttg tgggggaagt 5100
250 ggagggccag gtgggtggg agacaatgga tattgggatt gagggaggcg atggccgctg 5160
251 ggtctgcggc agcctctgca ccagcggcc cagactgcgg agatggagat cggcagcggc 5220
252 gggggcaggg agcagcggcg gagggggagg ggagcgagga ggcggggaga agctggagt 5280
253 agaaagcggg gagaggggag atctgggagg agctgatgag gaggggagt tatggggagg 5340
254 agctgctggg gagggaggcg ggagctagag gaggcgggag aagggagcgc tagcgggggc 5400
255 gtgggggagg gagctcagag ctcgggagag tttccggagg cgcagtgaca ggtgctgtga 5460
```

VERIFICATION SUMMARY

PATENT APPLICATION: US/09/988,117

DATE: 11/28/2001

TIME: 11:06:06

Input Set : A:\00742.066002.SEQLIST.TXT

Output Set: N:\CRF3\11212001\I988117.raw

L:15 M:270 C: Current Application Number differs, Replaced Current Application No

L:15 M:271 C: Current Filing Date differs, Replaced Current Filing Date